

ABSTRACT OF THE DISCLOSURE

2 An eye diagram analyzer equips each SUT data and clock signal channel with
individually variable delays. A specified combination (data signal delay, threshold and
4 which channel) is a location on an eye diagram, although the trace may or may not ever
go through that location. A counter counts the number of SUT clock cycles used
6 and another counter counts the number of times the specified combination of conditions
was met ("hits"). After watching a specified combination for the requisite length of time
8 or number of events, the number of SUT clock cycles involved and the associated number
of hits are stored in memory using a data structure indexed by the specified combination.
10 The process is repeated until all possible combinations within a stated range of data signal
delay and threshold voltage (using specified resolution/step sizes for delay and voltage)
12 have been investigated.